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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,928	02/07/2001	Kazumasa Azuma	016886/0181	6189

22428 7590 06/15/2004

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3000 K STREET NW  
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EXAMINER
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VINCENT, DAVID ROBERT

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/777,928

**Applicant(s)**

AZUMA ET AL.

**Examiner**

David R Vincent

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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***Specification***

1. The abstract of the disclosure is objected to because "SAR" is not defined when first used at page 5, line 1 and there are typographical errors at pgs. 4, 5, and 9. Page 4, line 11, "adoption" should be "adaptation"; pg. 5, line 29, "AAK 5" should be "AAL5"; and pg. 9, line 18, "an response" should be "a response". Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

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Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by DeNap (US 6,490,273).

Although the applicant's claims are extremely broad, in the interest of performing compact prosecution, the examiner searched the spec. and basically rejected the spec. In the event that the applicant wishes to amend the claims to include the details of the spec. the applicant is advised that applied art should be carefully read before doing so.

The examiner takes official notice (basically providing a dictionary to ATM terms) that the following is merely well known background material about how ATM operates and what some of the terms which are part of the ATM protocol mean. One of ordinary skill would understand that DeNap is using ATM adaptation layer(s) to convert voice data into ATM cells by specifying that a PSTN gateway/GW or hub outputs ATM cells. It is well known to use AAL1/AAL5 to encapsulate voice or CBR data from T1 lines into ATM 53 byte cells and to use UNI and especially Q.2931 for signaling.

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ATM Adaptation Layer (AAL): ATM Adaptation Layer (AAL) provides service-dependent functions to the layer above the AAL. The boundary between the ATM layer and the service-dependent AAL corresponds to the boundary between functions devoted to the cell header and functions devoted to the cell information field, respectively. The AAL supports higher layer functions of the User and Control planes. Information is mapped by the AAL into ATM cells. At the transmitting end, the information units are segmented or collected to be inserted into ATM cells. At the receiving end, the information units are reassembled or read-out from ATM cells. Any AAL specific information (e.g., information field length, sequence number) that must be passed between peer AAL is contained in the information field of each ATM cell. The AAL could be terminated in Terminal Equipment (TE), Terminal Adaptor (TA), NT2, NT1, Exchange Termination (ET), and Network Adaptor (NA). NA function includes those adaptation functions that are necessary between ATM and non-ATM networks. The AALs are terminated in the network for connectionless service, signaling, etc..

#### ATM Adaptation Layer 5: AAL5

AAL5 is the primary AAL for data and supports both connection-oriented and connectionless data. It is used to transfer most non-SMDS data, such as classical IP over ATM and LAN Emulation (LANE). AAL5 also is known as the simple and efficient adaptation layer (SEAL) because the SAR sublayer simply accepts the CS-PDU and segments it into 48-octet SAR-PDUs without adding any additional fields. AAL5 prepares a cell for transmission in three steps. First, the CS sublayer appends a variable-length pad and an 8-byte trailer to a frame. The pad ensures that the resulting PDU falls on the 48-byte boundary of an ATM cell. The trailer includes the length of the frame and a 32-bit cyclic redundancy check (CRC) computed across the entire PDU. This allows the AAL5 receiving process to detect bit errors, lost cells, or cells that are out of sequence. Second, the SAR sublayer segments the CS-PDU into 48-byte blocks. A header and trailer are not added (as is in AAL3/4), so messages cannot be interleaved. Finally, the ATM layer places each block into the Payload field of an ATM cell. For all cells except the last, a bit in the *Payload Type* (PT) field is set to zero to indicate that the cell is not the last cell in a series that represents a single frame. For the last cell, the bit in the PT field is set to one.

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UNI is the definition between an ATM-station and the ATM-switches. UNI4.0 is a newer version of UNI version 3.1. The version UNI3.1 is based upon Q.2931. This is a network signaling protocol from ITU-T that is based upon Q.931 which is used by the Narrowband-ISDN. The difference between those two is in the data link protocol. There are no real functional differences between the two, but they are not interoperable due the difference in the data link layer.

A route is built through the network using a connection request until it reaches the destination. This route is built using a ATM routing protocol (P-NNI) that uses both the addresses and the QoS that is asked by the source end-system. UNI version 4.0 has some new features but since the applicant did not claim any version of UNI nor any details of either, UNI4.0 will not be addressed in the below rejection.

A Switched Virtual Connection (SVC) is an ATM connection that is established and torn down through signaling based procedures.

As shown in Figs. 10-18, DeNap discloses voice circuit interfacing means (UNI, ATM user network interface, e.g., col. 7, lines 39-46; using SVCs, col. 3, lines 1-12; SVCs

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in Phase III col. 4, lines 49-54; col. 13, line 26-col. 21, line 40; using the PSTN to interface with the ATM network, col. 8, lines 55-64; Figs. 10-18), voice devices (e.g., telephones or T1 lines, Figs. 12-13, 15-17, 1901, Fig. 19), interexchange channel interfacing means (e.g., using the PSTN gateway/GW or hub to connect to the ATM network, Figs. 10-18; e.g., col. 13, lines 1-7; col. 14, lines 22-64), celling/decelling means (using the PSTN GW or hub to generate cells, Figs. 10-18; e.g., col. 8, lines 55-64; col. 9, lines 1-22; col. 13, lines 1-7; col. 14, lines 22-64), means to transfer celled voice data (Figs. 10-18, ATM uses virtual connections, VPI/VCI), decelling (translating back to analog voice using the PSTN GW or hub at a destination, e.g. cols 9-10, especially col. 9, lines 1-22), connection control means for performing cutting (the ATM signaling protocol Q.2931 sets up and tears down connections; session manager, col. 4, lines 49-54; SS7 signaling, col. 10, lines 44-49; col. 13, lines 58-64, col. 14, lines 22-39; close voice channel, col. 17, lines 23-40; on-hook, col. 18, lines 50-59), call connecting means (the ATM signaling protocol Q.2931 sets up and tears down connections; session manager, col. 4, lines 49-54; SS7 signaling, col. 10, lines 44-49; col. 13, lines 58-64, col.

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14, lines 22-39; close voice channel, col. 17, lines 23-40; on-hook, col. 18, lines 50-59), deliver voice signals to voice circuit interfacing means (Figs. 10-18; cols. 13-21, especially col. 17, lines 23-40; on-hook, col. 18, lines 50-59; col. 14, line 22-col. 15, line 36), using calling messages and switch type VCs (no real detail about what applicant is intending to claim here but clearly using SVCs, and the various call setup protocols such as SS7, USUP, and TCAP, col. 14 and 17 reads on this), and as specified in claims 1-3.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David R Vincent whose telephone number is 703 305 4957. The examiner can normally be reached on M-TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on 703 305 4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David R Vincent  
Primary Examiner  
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June 13, 2004